



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/561,842

12/22/2005

Masaki Yoda

1000023-000095

5530

21839 7590 03/20/2009  
BUCHANAN, INGERSOLL & ROONEY PC  
POST OFFICE BOX 1404  
ALEXANDRIA, VA 22313-1404

EXAMINER

HINES, LATOSHA D

ART UNIT

PAPER NUMBER

1797

NOTIFICATION DATE

DELIVERY MODE

03/20/2009

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ADIPFDD@bipc.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/561,842	<b>Applicant(s)</b> YODA ET AL.	
	<b>Examiner</b> LATOSHA HINES	<b>Art Unit</b> 1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 22 December 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>12/22/2005, 11/19/2007</u> .                                  | 6) <input type="checkbox"/> Other: _____                          |

### DETAILED ACTION

1. This is the initial Office action based on the 10/561842 application filed on December 22, 2005.
2. Claims 1-9 are pending and have been fully considered.

#### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over TOYODA (US 2003/0171481).

TOYODA discloses a polyolefin wax for a coating material which comprises a specific ethylene copolymer. The ethylene copolymer is an ethylene homopolymer or a copolymer of ethylene and an  $\alpha$ -olefin or more than one  $\alpha$ -olefin. Examples of the  $\alpha$ -olefin include propene, 1-butene, 1-pentene, and so on (paragraph 0035-0036). The ethylene polymer which is an ethylene homopolymer or an ethylene/ $\alpha$ -olefin copolymer, in which the number average molecular weight is within the range of from 400 to 8000 as measured by gel permeation chromatography (GPC),  $M_n/M_w$  is no greater than 4 (paragraph 0021). The ethylene copolymer is manufactured using a vanadium catalyst or a metallocene catalyst (paragraph 0017). The polyolefin wax for coating material comprises the ethylene copolymer which is solid at room temperature and

becomes a low-viscosity liquid at or above a temperature of from 80 to 120°C (paragraph 0044). TOYODA gives various examples of the production of ethylene  $\alpha$ -olefin copolymers. The results are listed below in Table 1a:

TABLE 1a

Ethylene-based polymer name	Catalyst type	$\alpha$ -olefin type	$\alpha$ -olefin content (mol %)	Number-average molecular wt (Mn)	$[\eta]$ (dl/g)	Density (D) (kg/m <sup>3</sup> )	Penetration (dmm)	Left side of formula (D)	Crystallization temperature (Tc) (°C)	
WAX a1	Metallocene	Propene	7.3	2050	0.22	926	1	94.9	93	Production Ex. a1
WAX a2	Same as Prod. Ex. a1	1-butene	5.6	1900	0.22	926	1	94.9	93	Production Ex. a2
WAX a3	Same as Prod. Ex. a1	None	0	2000	0.22	977	0	123	110	Production Ex. a3
WAX a4	Ziegler	1-butene	5.4	2000	0.2	917	3	93.5	101	Comp. Prod. Ex. a1
WAX a5	Same as Prod. Ex. a1	Propene		2000	0.22	957	0			Production Ex. a4
WAX a6	Same as Prod. Ex. a1	Propene		2000	0.26	927	1			Production Ex. a5
WAX a7	Ziegler	None		1900	0.33	980	0			Comp. Prod. Ex. a2
WAX a8	Ziegler	Propene		2000	0.33	980	2			Comp. Prod. Ex. a3
WAX a9	Ziegler	Propene		2000	0.22	930	3			Comp. Prod. Ex. a4
WAX a10	Ziegler	Propene		2500	0.26	924	4			Comp. Prod. Ex. a5
WAX a11	Same as Prod. Ex. a1	None		1300	0.19	974	0			Production Ex. a6
WAX a12	Same as Prod. Ex. a1	Propene		1300	0.19	955	0			Production Ex. a7
WAX a13	Same as Prod. Ex. a1	Propene		1700	0.19	914	1			Production Ex. a8
WAX a14	Same as Prod. Ex. a1	Propene		1700	0.19	923	3			Production Ex. a9
WAX a15	Same as Prod. Ex. a1	Propene		1700	0.19	917	3			Production Ex. a10
WAX a16	Ziegler	None		1300	0.19	973	0			Comp. Prod. Ex. a6
WAX a17	Ziegler	Propene		1700	0.19	926	7			Comp. Prod. Ex. a7
WAX a18	Same as Prod. Ex. a1	None		900	0.13	970	0			Production Ex. a11
WAX a19	Same as Prod. Ex. a1	Propene		1000	0.13	942	2			Production Ex. a12
WAX a20	Same as Prod. Ex. a1	Propene		1000	0.13	923	7			Production Ex. a13
WAX a21	Same as Prod. Ex. a1	Propene		1300	0.13	914	7			Production Ex. a14
WAX a22	Ziegler	None		1100	0.13	970	1			Comp. Prod. Ex. a8
WAX a23	Ziegler	Propene		1000	0.13	940	4			Comp. Prod. Ex. a9
WAX a24	Ziegler	Propene		1200	0.13	926	13			Comp. Prod. Ex. a16

Examiner reasons it would have been obvious to one having ordinary skill in the art when using the data of examples a1 through a24 of TOYODA with the combination of information throughout the reference the composition easily satisfies the formula in claim 1 ( $-0.53t_s + 62 > Y > -0.53T_s + 53$  which equals  $9 > Y > -9$ ). In paragraph 0042 TOYODA discloses that in the ethylene copolymer Y is the penetration hardness (dmm).

TOYODA also discloses production of modified ethylene copolymer for example a polyethylene wax (~ 6.81 parts by weight) with 1-butene. As a result, a maleic-anhydride-modified polyethylene, having an acid value of 60 KOH

Art Unit: 1797

(mg/g) (~.6 KOH mg/g when using parts by weight of polyethylene wax), an intrinsic viscosity  $[\eta]$  of 0.17 (dl/g) (measured at the 135C in decalin) and a melting point of 110°C was obtained (paragraphs 0278-0280).

Once the amount of polyolefin wax has been contained it can be added in any step of the processes conventionally used for manufacturing printing inks such as kneading to form an ink or the polyolefin wax can be blended with a material that has undergone dispersion and kneading processes to form an ink (molding) (paragraph 0110).

### ***Conclusion***

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to LATOSHA HINES whose telephone number is 571-270-5551. The examiner can normally be reached on Monday thru Thursday from 8 a.m. to 5 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on 571-272-1444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1797

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/LATOSHA HINES/  
Examiner, Art Unit 1797

/Cephia D. Toomer/  
Primary Examiner, Art Unit 1797